

Listing of Claims:

Claim 1 (currently amended) A radial engine including:

an engine block having a central aperture;

a drive shaft extending through said aperture;

a spaced pair of cam plates rotationally fixed with respect to each other, the plates being fixedly mounted on said shaft;

each cam plate including a planar face, the planar face of one cam plate opposing the planar face of the other cam plate;

the opposing faces each including a pair of spaced opposing walls defining a substantially "figure 8" shaped continuous loop, the walls on one said face being aligned with the walls on the opposing face;

at least one cylinder fixed with respect to said block and extending outwardly from said block;

a reciprocable piston slidably mounted within said cylinder;

a connecting rod fixedly connected at one end to said piston and having an opposing free end;

a slider bearing located on said free end of said connecting rod, said slider bearing engaging with a guide for guiding said slider bearing during reciprocation of said piston; and

a cam follower engaged with said walls of each cam plate, wherein reciprocation of said piston rotates said plates and said drive shaft; and

Amendment Response
Serial No. 10/512,122 Group Art Unit 3743
Atty. Docket No. 5754-2
Page 10 of 18

wherein said guide is defined by a radially extending bore in said engine block and sidewalls of said bore laterally support said slider bearing during reciprocation of said piston.

Claim 2 (cancelled)

Claim 3 (currently amended) ~~A radial engine as claimed in claim 1 wherein~~ A radial engine including:

an engine block having a central aperture;

a drive shaft extending through said aperture;

a spaced pair of cam plates rotationally fixed with respect to each other, the plates being fixedly mounted on said shaft;

each cam plate including a planar face, the planar face of one cam plate opposing the planar face of the other cam plate;

the opposing faces each including a pair of spaced opposing walls defining a substantially "figure 8" shaped continuous loop, the walls on one said face being aligned with the walls on the opposing face;

at least one cylinder fixed with respect to said block and extending outwardly from said block;

a reciprocable piston slidably mounted within said cylinder;

a connecting rod fixedly connected at one end to said piston and having an opposing free end;

Amendment Response
Serial No. 10/512,122 Group Art Unit 3743
Atty. Docket No. 5754-2
Page 11 of 18

a slider bearing located on said free end of said connecting rod, said slider bearing engaging with a guide for guiding said slider bearing during reciprocation of said piston;
and

a cam follower engaged with said walls of each cam plate, wherein reciprocation of said piston rotates said plates and said drive shaft; and wherein

said slider bearing includes a prismatic body.

Claim 4 (previously amended) A radial engine as claimed in claim 1 wherein said cam follower is located on said slider bearing.

Claim 5 (previously amended) A radial engine as claimed in claim 1 wherein said cam follower is a pin.

Claim 6 (previously amended) A radial engine as claimed in claim 1 wherein each said substantially "figure 8" shaped continuous loop is defined by a groove in each said plate and said cam follower projects into each said groove.

Claim 7 (previously amended) A radial engine as claimed in claim 1 further including a guide for translationally guiding said connecting rod.

Claim 8 (currently amended) ~~A radial engine as claimed in claim 7~~ A radial engine including:

an engine block having a central aperture;

a drive shaft extending through said aperture;

a spaced pair of cam plates rotationally fixed with respect to each other, the plates being fixedly mounted on said shaft;

Amendment Response
Serial No. 10/512,122 Group Art Unit 3743
Atty. Docket No. 5754-2
Page 12 of 18

each cam plate including a planar face, the planar face of one cam plate opposing the planar face of the other cam plate;

the opposing faces each including a pair of spaced opposing walls defining a substantially "figure 8" shaped continuous loop, the walls on one said face being aligned with the walls on the opposing face;

at least one cylinder fixed with respect to said block and extending outwardly from said block;

a reciprocable piston slidably mounted within said cylinder;

a connecting rod fixedly connected at one end to said piston and having an opposing free end;

a slider bearing located on said free end of said connecting rod, said slider bearing engaging with a guide for guiding said slider bearing during reciprocation of said piston;

a cam follower engaged with said walls of each cam plate, wherein reciprocation of said piston rotates said plates and said drive shaft; and,

a guide for translationally guiding said connecting rod; and,

wherein said guide is defined by a complementary bore in said engine block and the sidewall of said bore laterally supports said connecting rod during reciprocation of said piston.

Claim 9 (previously amended) A radial engine as claimed in claim 8 wherein said sidewall includes a longitudinal slot through which said cam follower projects.

Claim 10 (previously amended) A radial engine as claimed in claim 1 wherein said cam follower includes a roller for rolling engagement with said walls.

Claim 11 (cancelled)

Claim 12 (previously amended) A radial engine as claimed in claim 1 wherein said engine includes a plurality of said cylinders.

Claim 13 (previously amended) A radial engine as claimed in claim 12 including an even number of said cylinders, regularly circumferentially spaced around the periphery of said engine block.

Amendment Response
Serial No. 10/512,122 Group Art Unit 3743
Atty. Docket No. 5754-2
Page 14 of 18